

North Dakota Pipeline Authority
Justin J. Kringstad
December 30, 2010

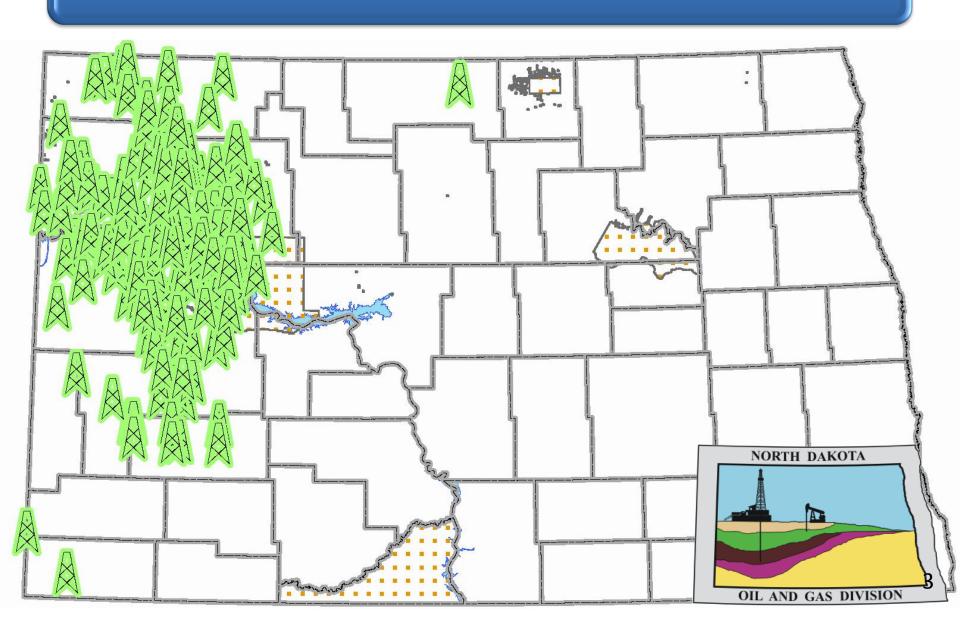
Industry

Policy Makers

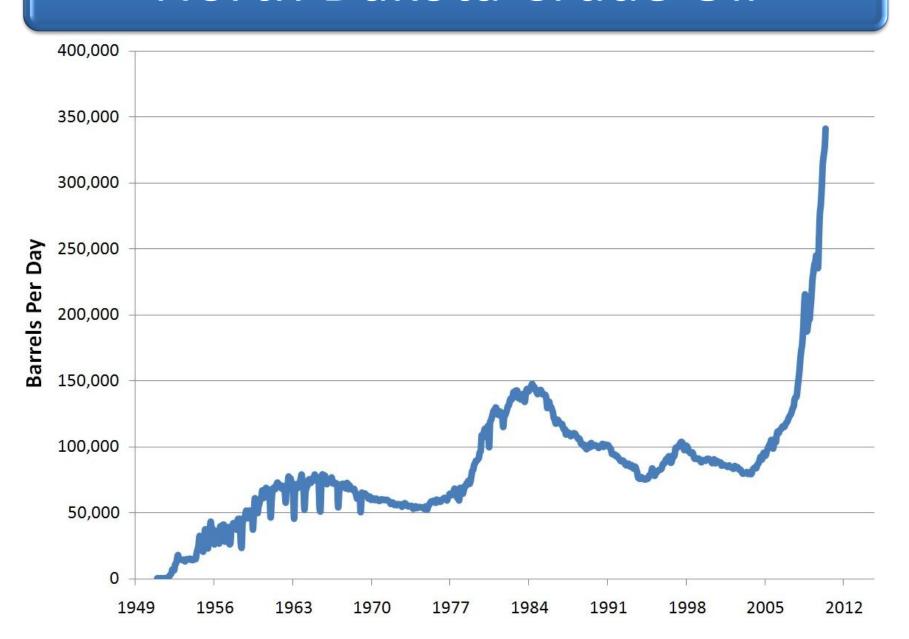
Pipeline Authority Regulators

Public

#### December 29, 2010: 156 Drilling Rigs



## North Dakota Crude Oil



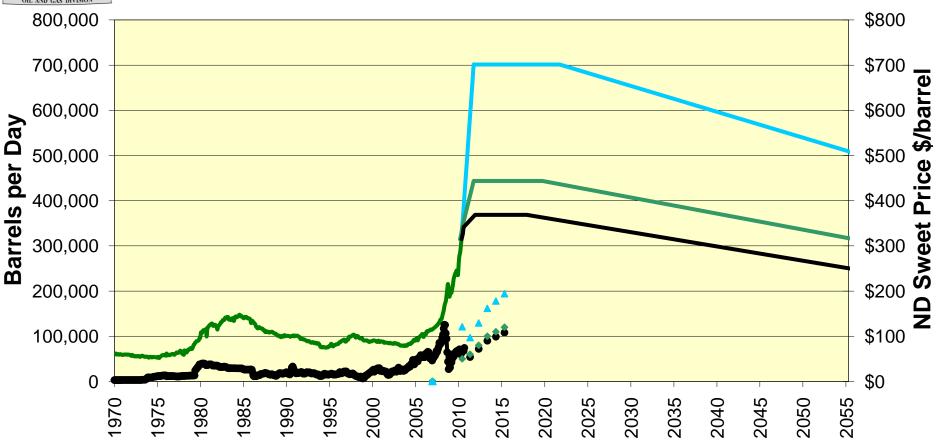
# Prediction is very difficult, especially if it's about the future.

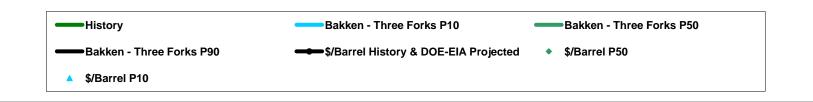
-Niels Bohr



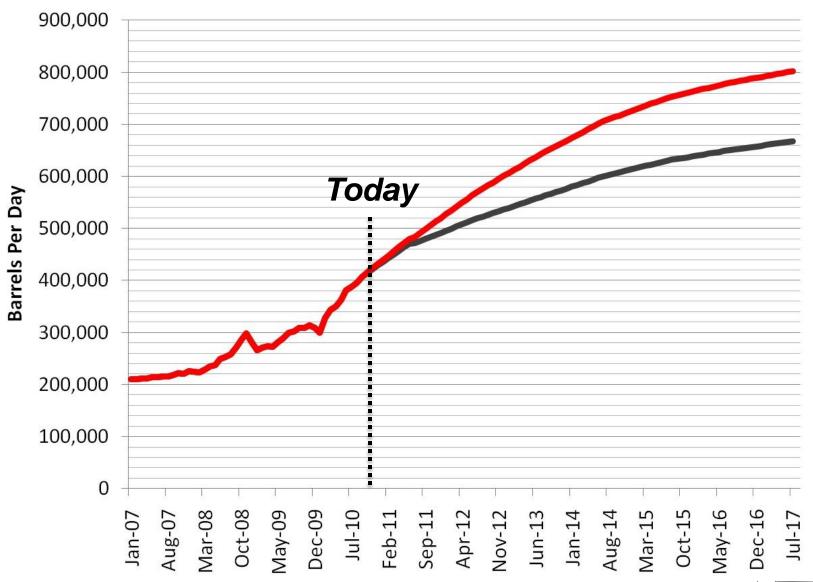
# OIL AND GAS DIVISION

#### North Dakota Oil Production and Price



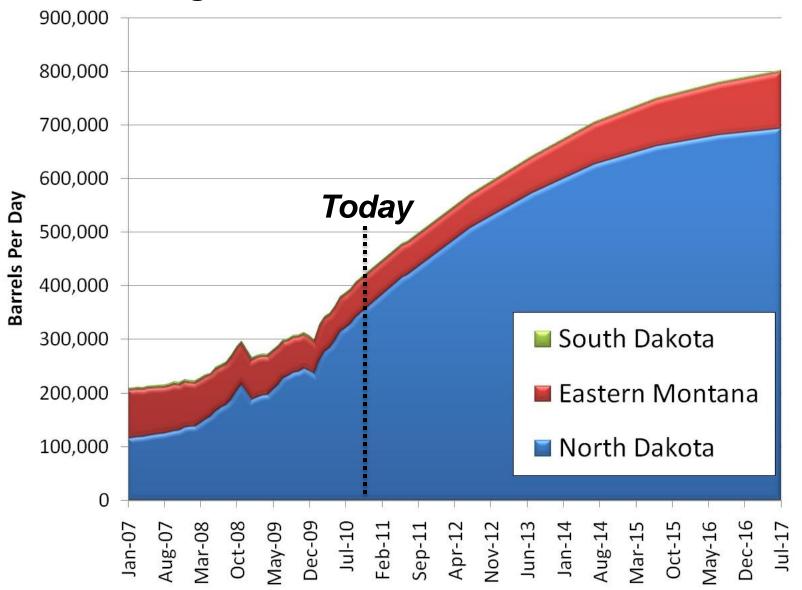


#### Forecasting Williston Basin Oil Production, BOPD

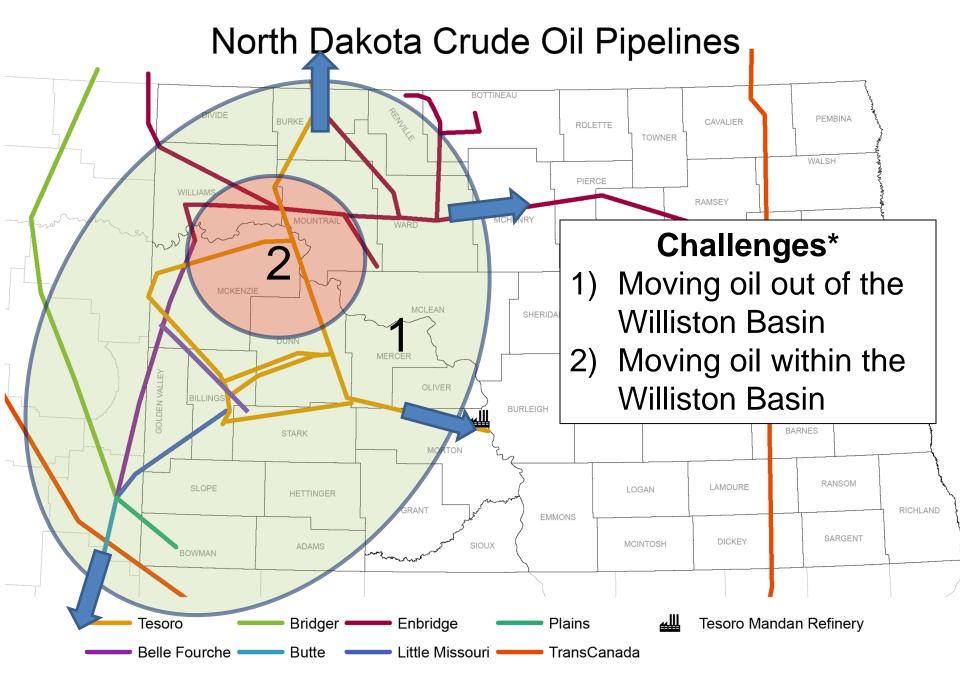


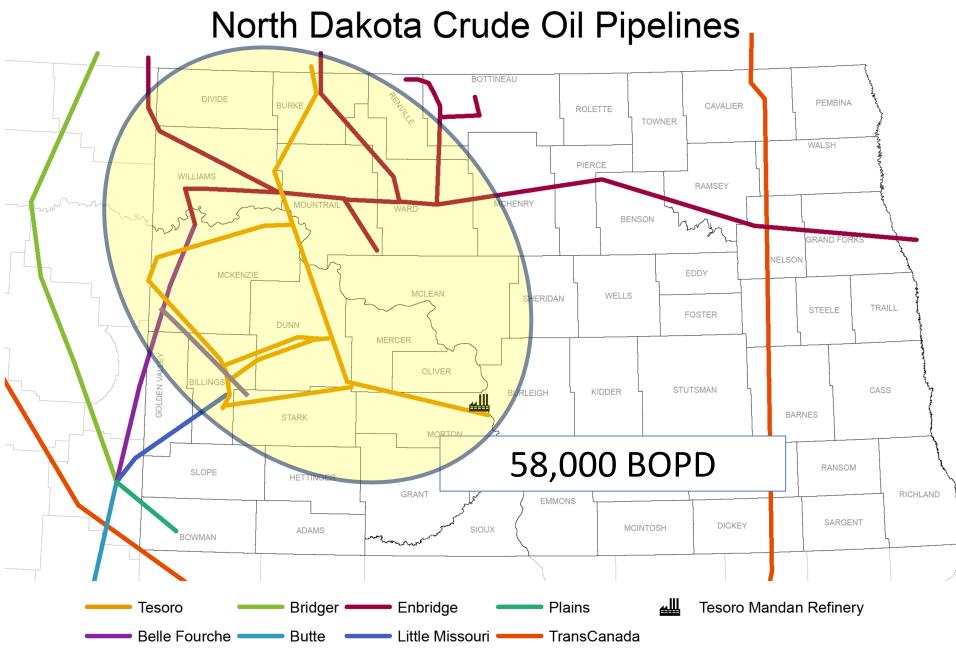
Production forecast is for visual demonstration purposes only and should not be considered accurate for any near or long term planning.

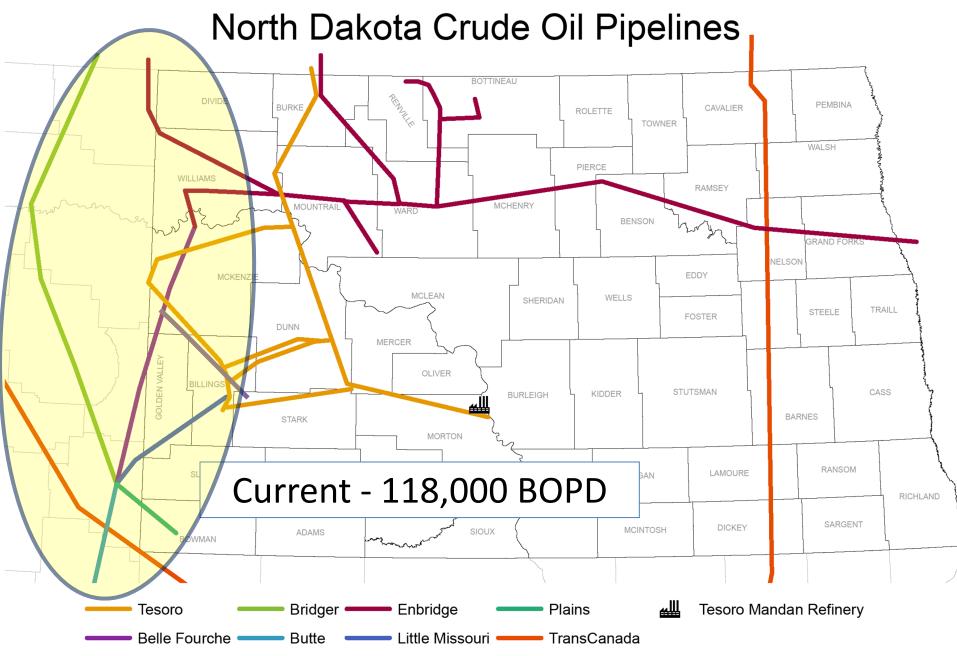
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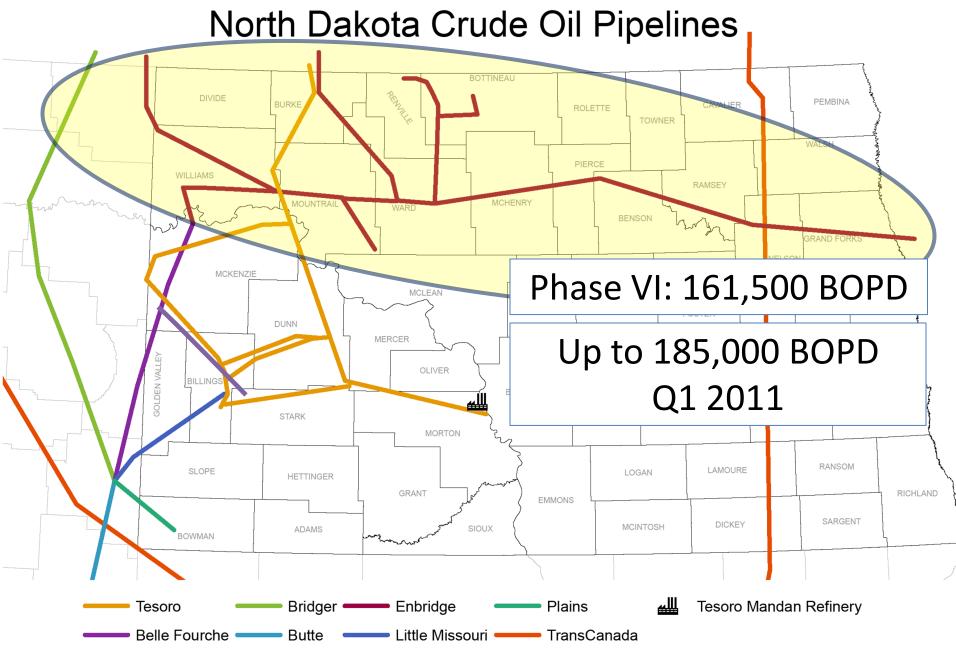


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## Rail Transportation



Others Include:

Minot

Dore

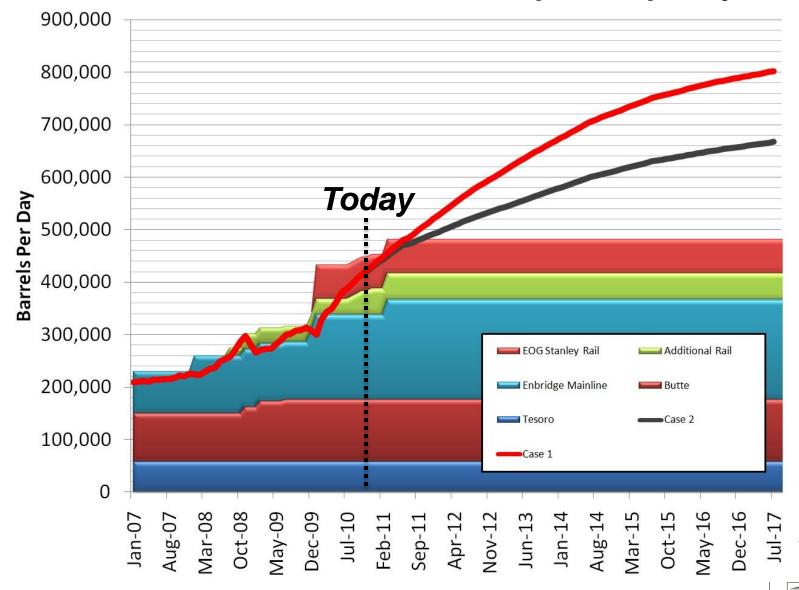
Stampede

Donnybrook

Dakota Transport Solutions - New Town, ND

Images Provided By: Loren Kopseng

#### Williston Basin Oil Production & Export Capacity, BOPD



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# The future starts today, not tomorrow.

-Pope John Paul II



# Several Exciting Developments For Post 2010 Crude Oil Transport

Enbridge Bakken Expansion Program

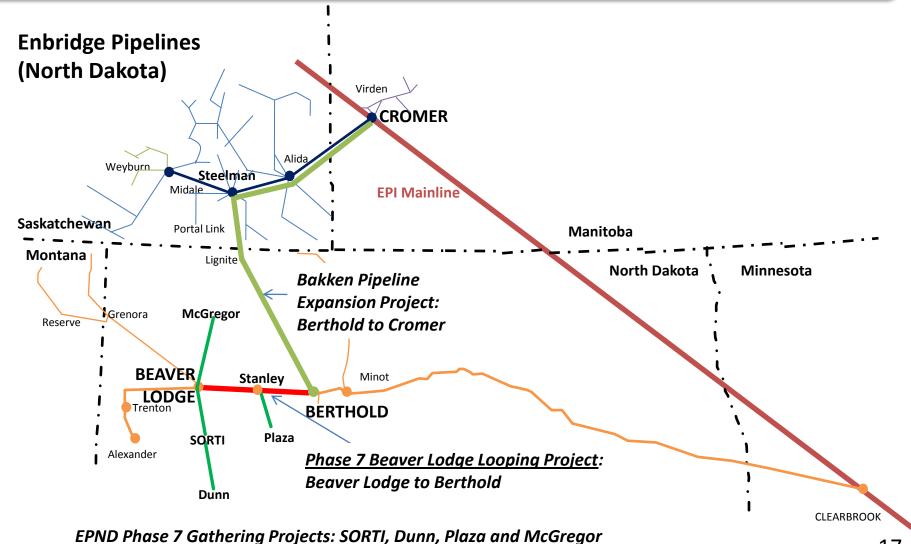
Keystone XL Marketlink

True Co.'s Baker 300

Plains Bakken North

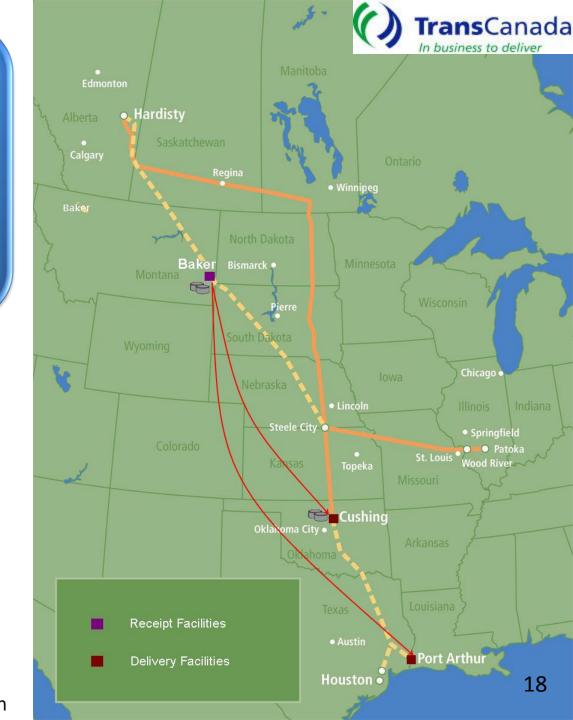
Unit Train Development

## Bakken Pipeline Expansion

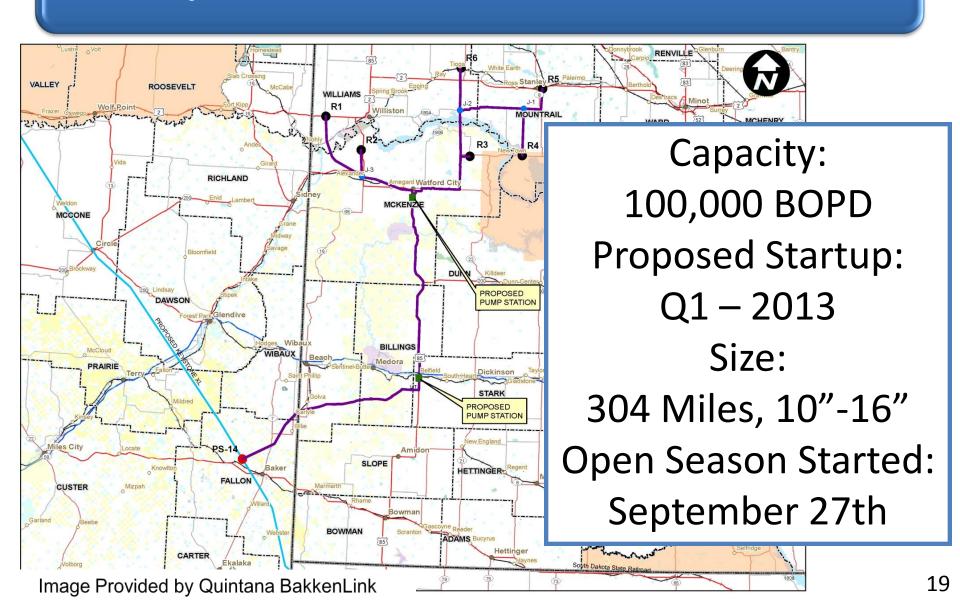


# Proposed TransCanada Marketlink

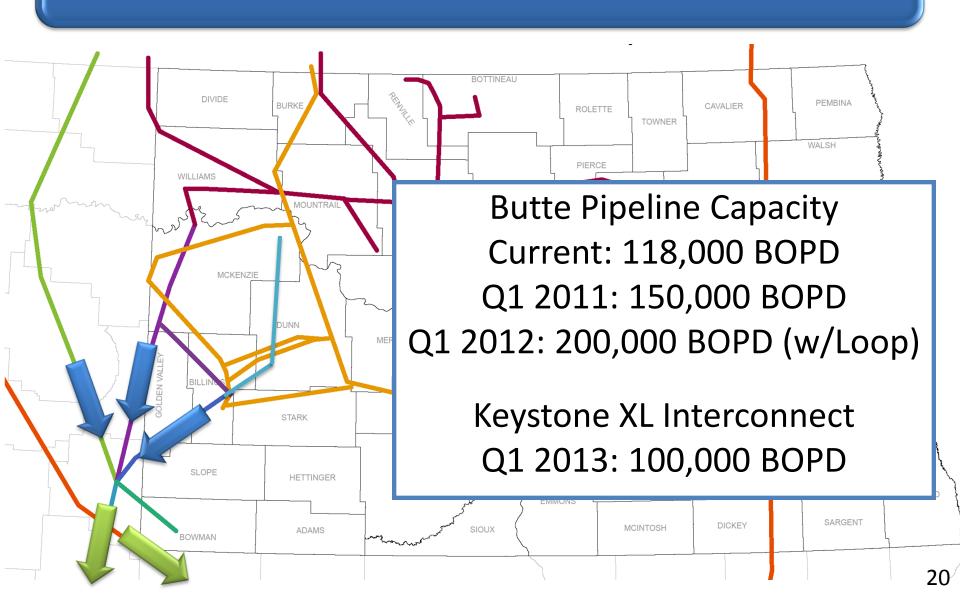
- Binding OpenSeason Complete
- Q1 2013
   Proposed Startup



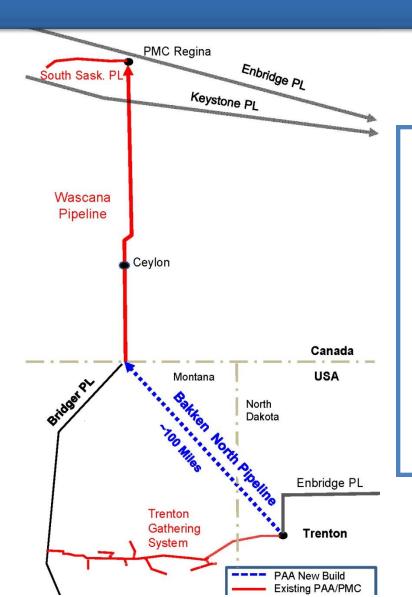
### Proposed Quintana BakkenLink



# True Co.'s Proposed "Baker 300"



### Plains Bakken North Pipeline

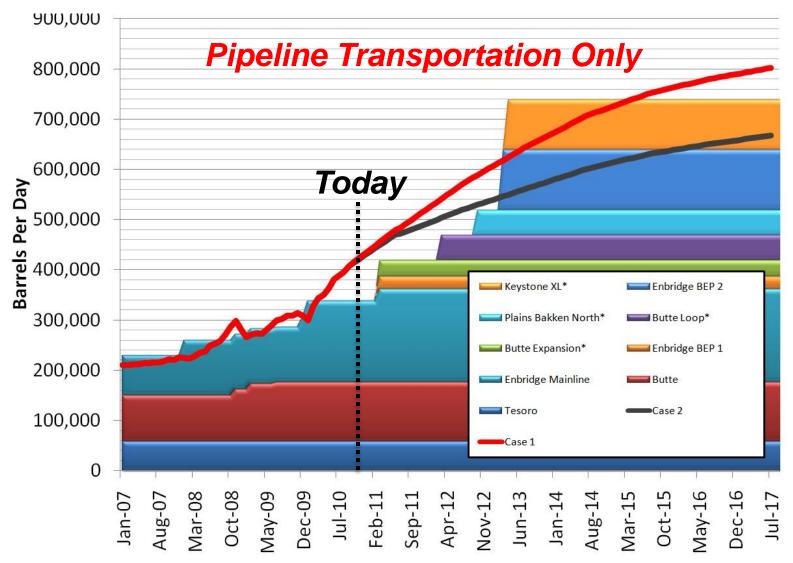


Proposed Capacity 50,000-75,000 BOPD Q4 2012

New 103 Miles, 12" Pipeline Reverse Wascana Pipeline

\$160-\$200 Million

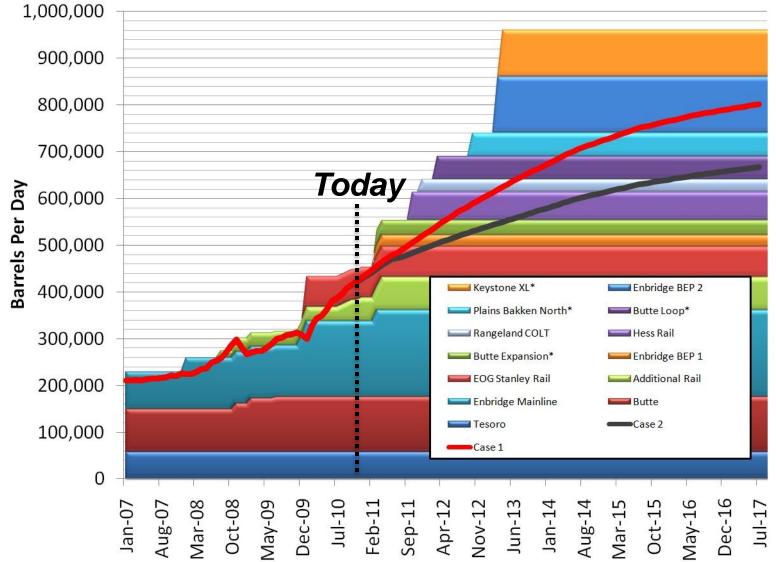
#### Williston Basin Oil Production & Export Capacity, BOPD



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\*Projects still in the proposed or internal review process

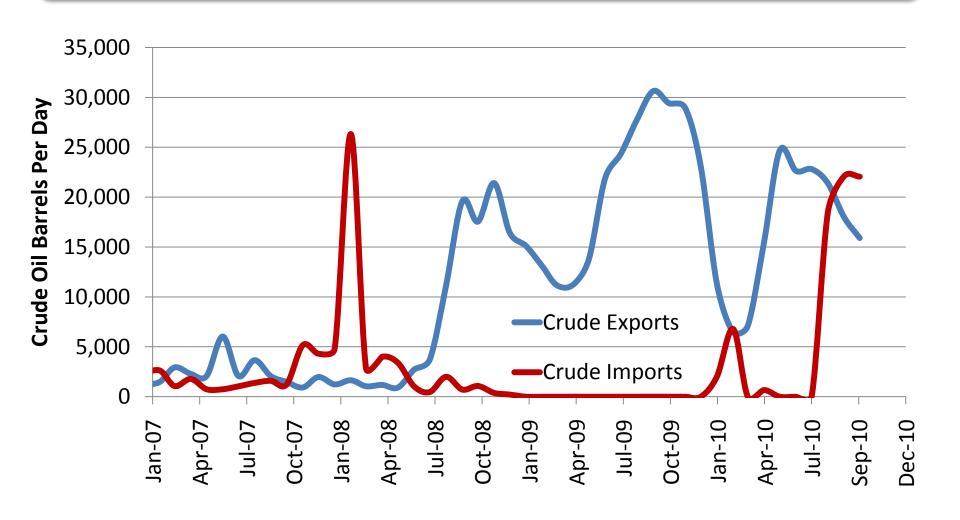
#### Williston Basin Oil Production & Export Capacity, BOPD

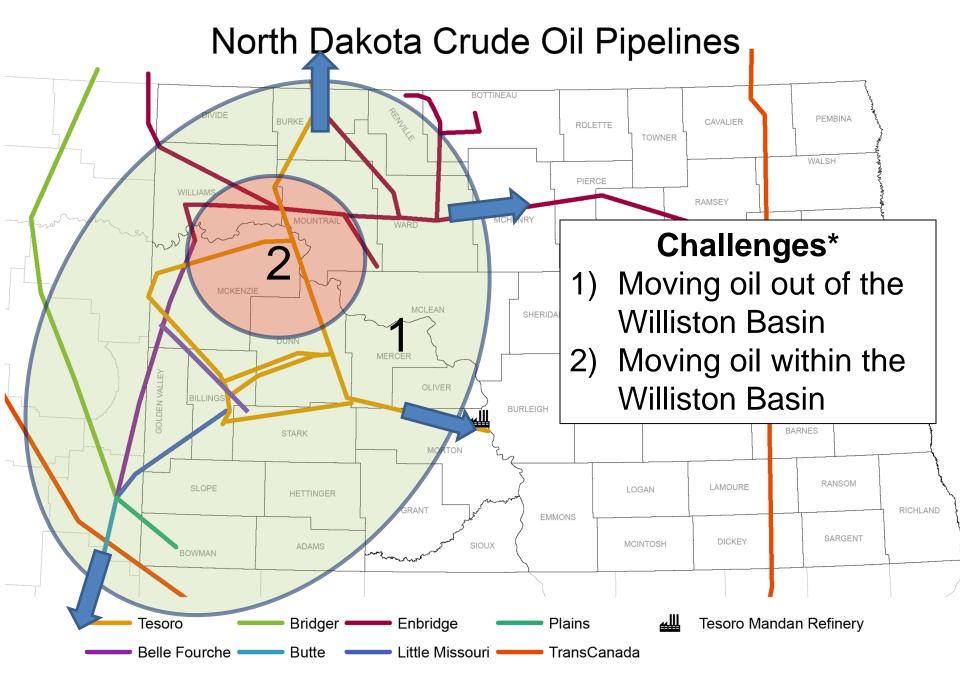


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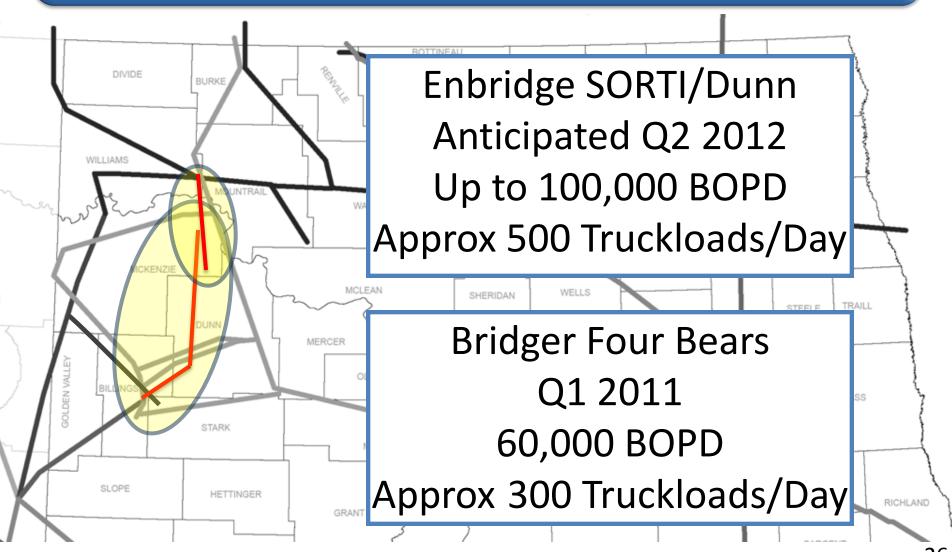
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#### **North Dakota Truck Imports/Exports**

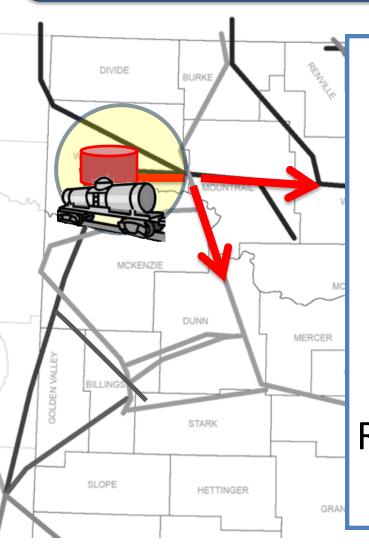




# Reducing Truck Traffic



# Rangeland COLT Hub and Pipeline



Gathering, Storage, & Transportation

Tie into Enbridge & Tesoro (20 Mile - 8" - 40,000 BOPD)

Anticipated Dec 2011

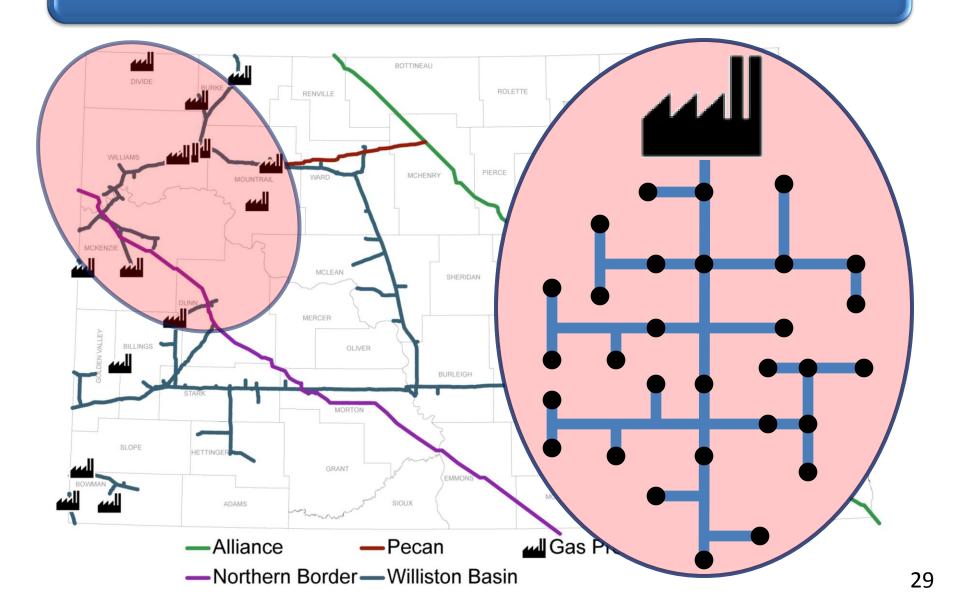
210,000 Barrels of Tankage

Rail up to 27,000 BOPD initially (Expandable up to 60,000)

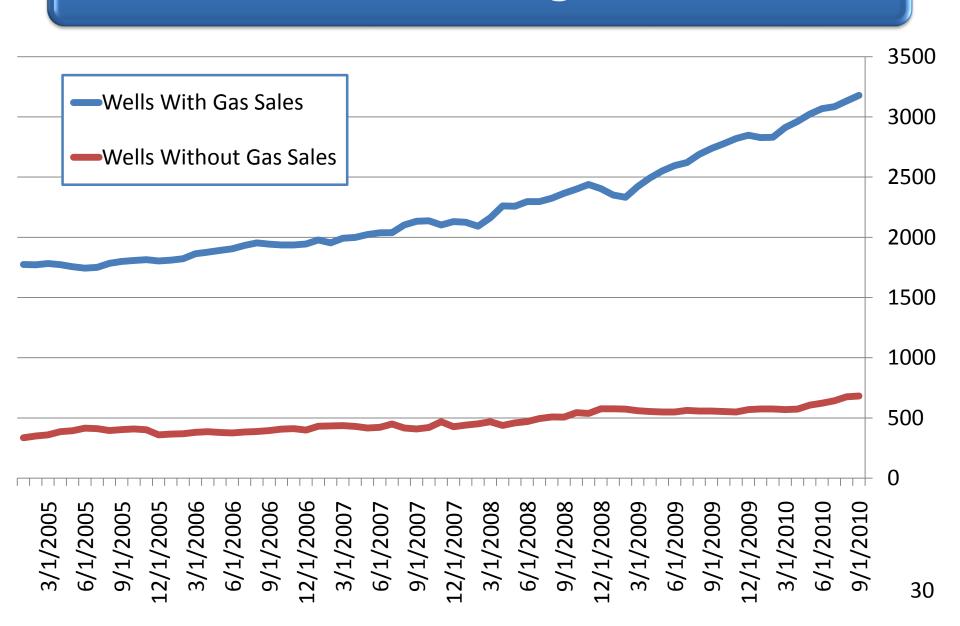
# Natural Gas Projects

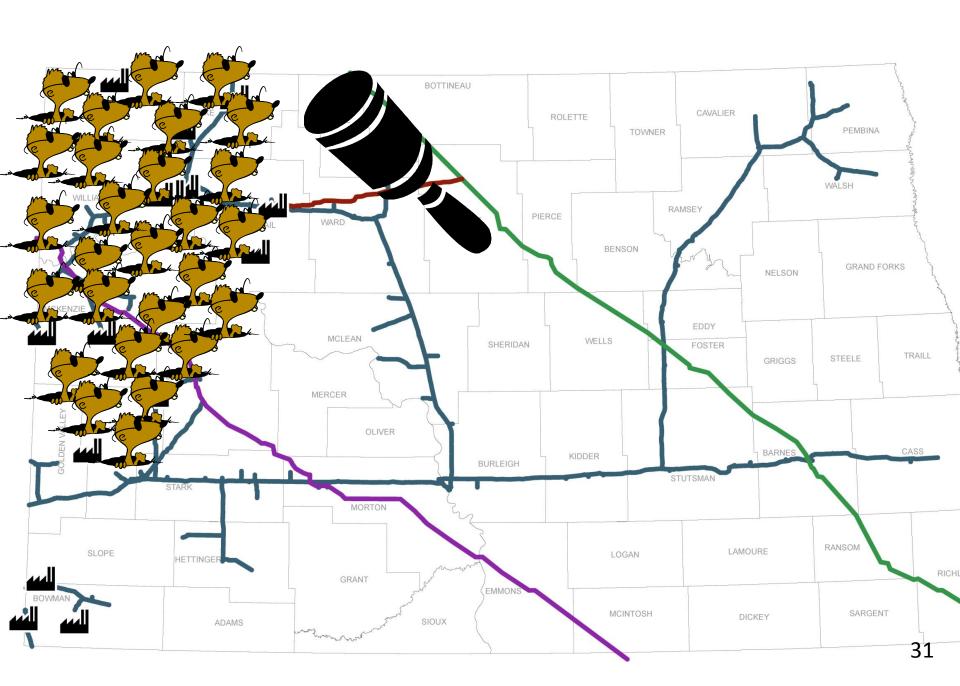


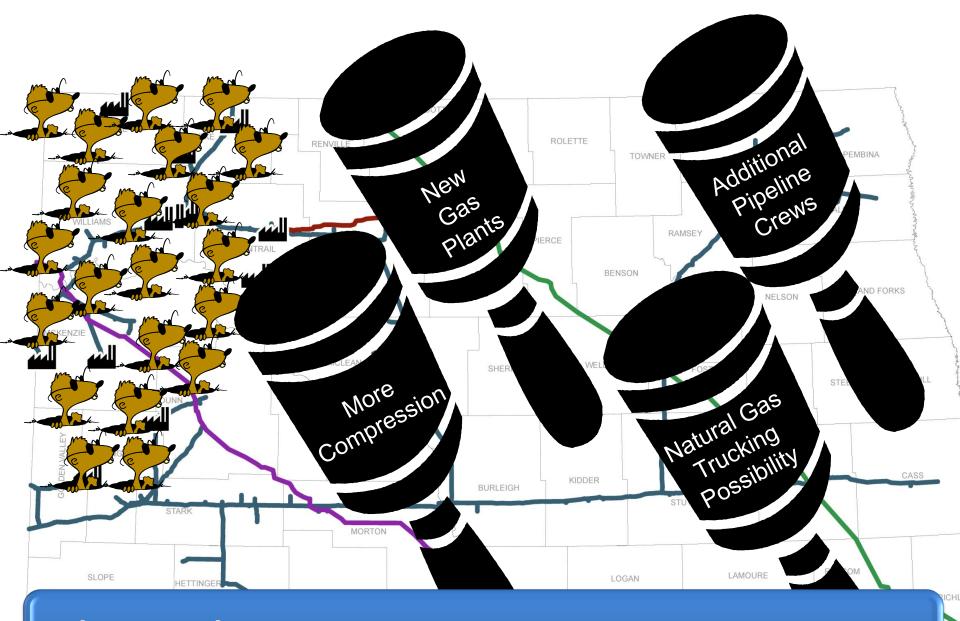
# Natural Gas Challenges



#### **ND Gas Gathering Statistics**

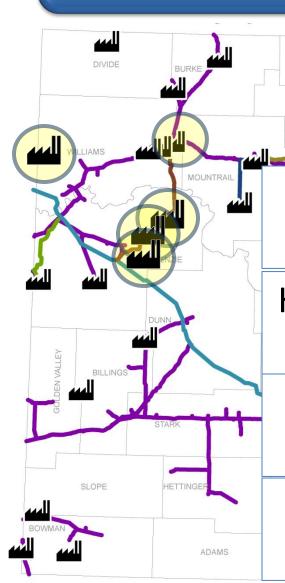






\$2.2 - \$2.5 BILLION In the Next 1-3 Yrs

# New or Expanding Gas Plants



Hess Tioga Gas Plant

Current: 110 MMCFD

Q4 2012: 250 MMCFD



Saddle Butte Pipeline

Q4 2010: 45 MMCFD

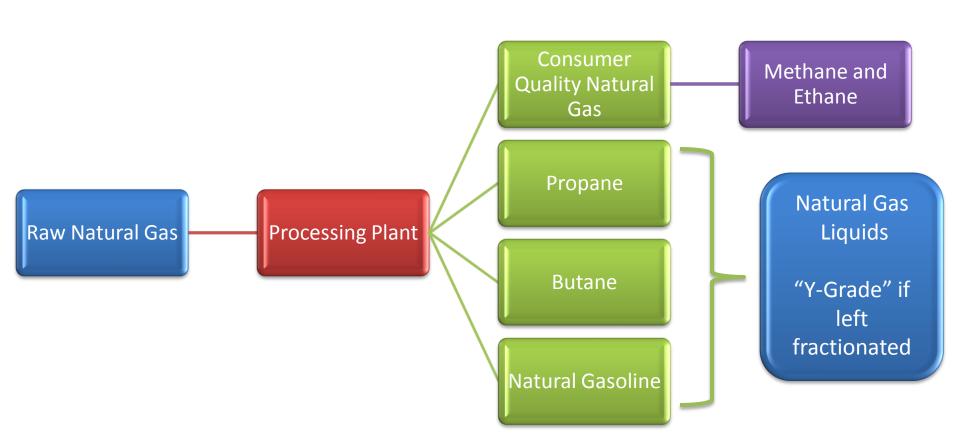
Hiland Partners Watford City Plant Q1 2011: 50 MMCFD

ONEOK Garden Creek Plant Q4 2011: 100 MMCFD

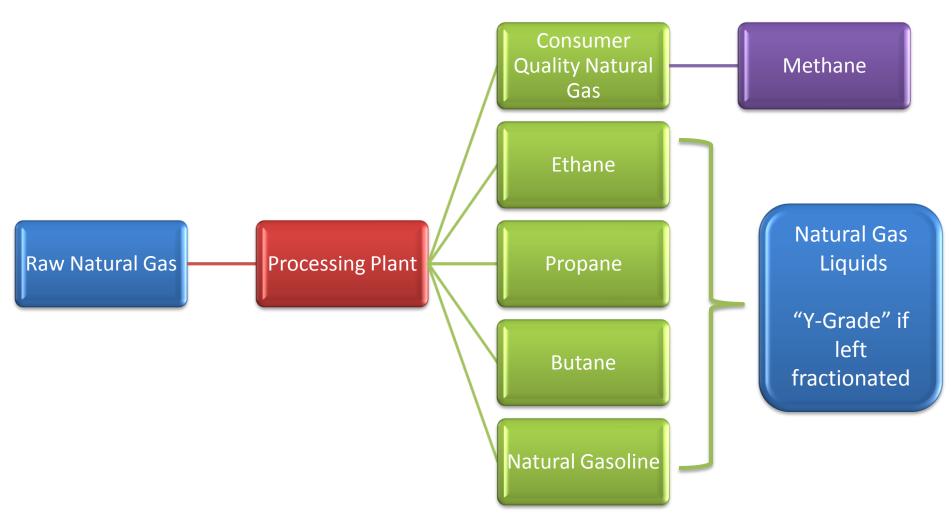
ONEOK Stateline I Plant Q3 2012: 100 MMCFD

RICHLAND

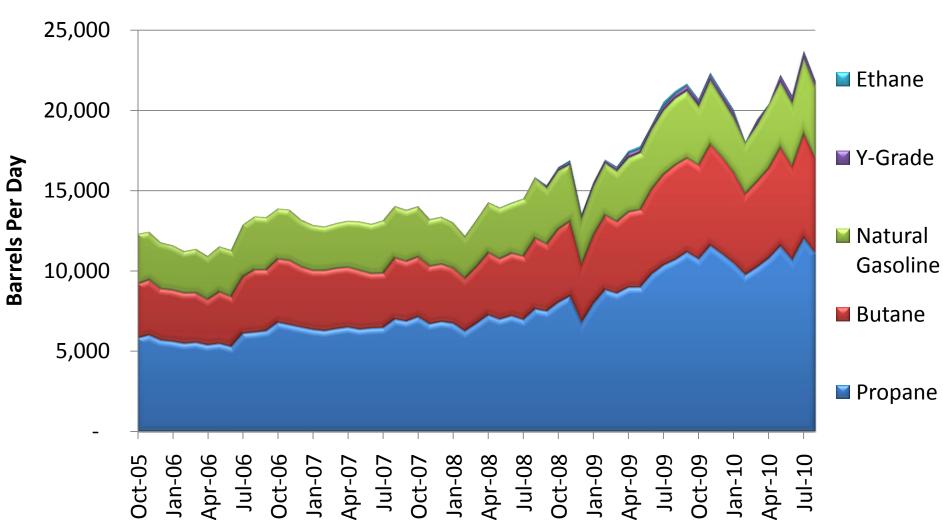
# Natural Gas Processing Current Status



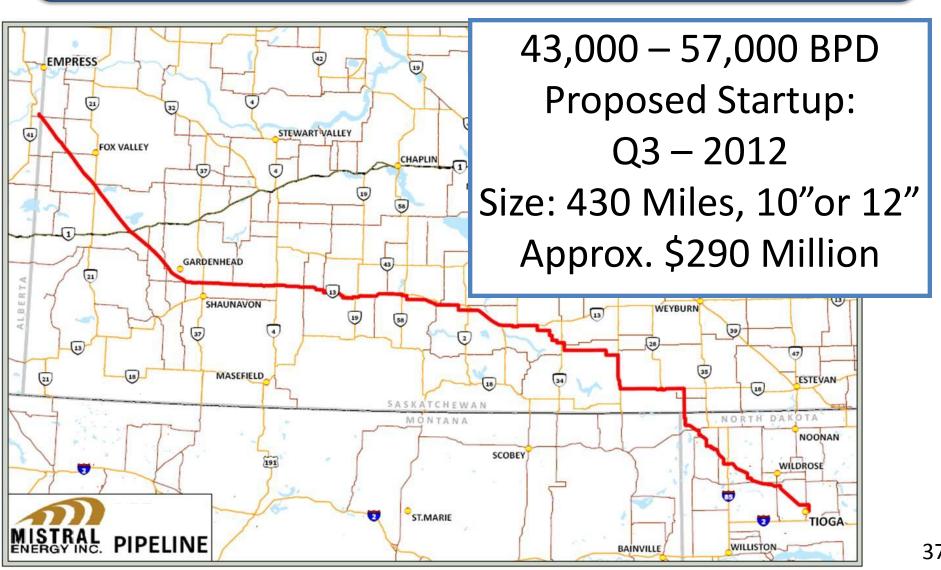
# Natural Gas Processing With Ethane Extraction



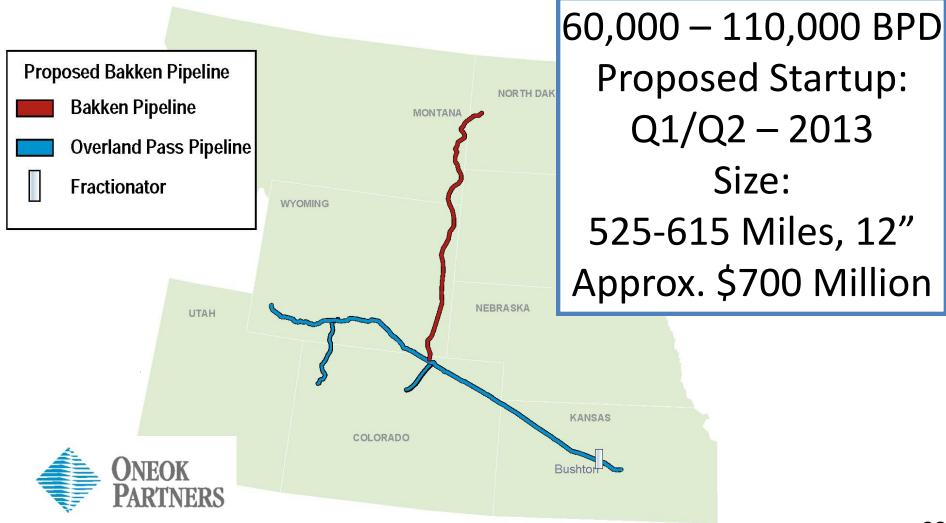
# North Dakota Natural Gas Liquids



## Vantage Pipeline: Ethane



# ONEOK Bakken Pipeline: Y-Grade

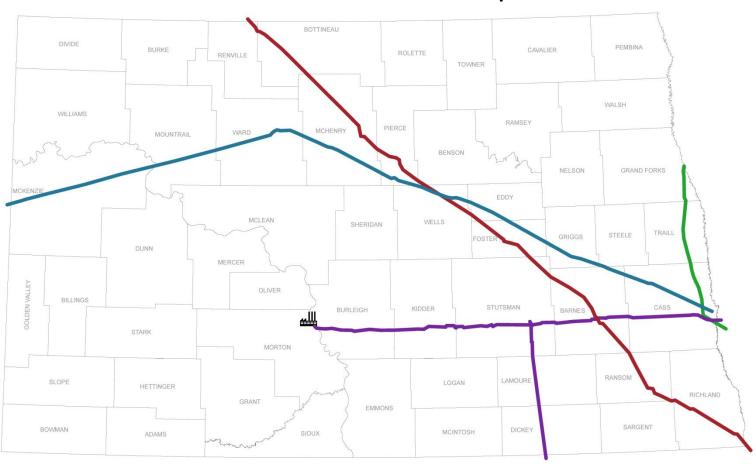


# Refining Study



# Refining Study

#### North Dakota Products Pipelines



Tesoro Mandan Refinery

#### NDPA Monthly Webinars





INDUSTRIAL COMMISSION OF NORTH DAKOTA

NORTH DAKOTA PIPELINE AUTHORITY
Governor John Hoeven
Attorney General Wayne Stenehjem
Agriculture Commissioner Doug Goehring
Director Justin J. Kringstad

Pipeline Publication

Keeping North Dakota Connected

Volume II Issue IV - December 2009

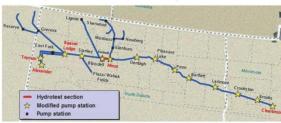
#### Greetings

Season's Greetings from the North Dakota Pipeline Authority! While the temperature in North Dakota is dropping fast, the activity in North Dakota's oilfields is heating up. With more rigs moving into the basin, improved well completion techniques, and quicker spud to spud times, North Dakota petroleum production is expected to grow for many years to come. Along with the growing crude oil production, several exciting transportation expansion projects are very near completion, with many more in the works. For additional project information, past newsletters, maps, reports, and more please visit the Pipeline Authority website, www.pipeline.nd.gov.

#### Enbridge Phase VI Expansion Update

The much anticipated Enbridge Phase VI Expansion is nearly complete. Scheduled to be in service on January 1, 2010, the expansion will increase Enbridge's mainline capacity to Clearbrook, MN from 110,000 barrels per day (BOPD) to 161,600 BOPD. Once complete, Enbridge North Dakota will have more than doubled its 2007 system capacity of 80,000 BOPD.

More good news is that Enbridge has no intentions of stopping at 161,600 BOPD and is actively working to gain support from interested shippers for the proposed Portal Reversal Expansion Project or PREP. As proposed, PREP would allow Enbridge to transport an additional 30,000 BOPD by 2011 and up to an additional 115,000 BOPD by 2013.



Details of Enbridge's Phase VI Expansion. Source: Enbridge Pipelines LLC - www.enbridge-expansion.com

# North Dakota Statistics

	Aug-09	Sept-09	Oct-09
Average Daily Oil Production, BOPD	232,355	238,265	239,067
Average Daily Gas Production, MMCFD	266.66	259.76	253.04
Wells Producing	4,545	4,579	4,606
Average Rig Count	45	51	56

As of December 16, 2009, there are 77 active rigs in North Dakota.

www.pipeline.nd.gov

#### Prairie Rose Pipeline Nears Completion

An unexpected construction specification change has delayed the startup of the Pecan Prairie Rose Pipeline until Mid-January, 2010. The new 75 mile, 12 inch pipeline is designed to transport up to 80 million cubic feet of unprocessed natural gas per day from Mountrail County to an interconnect with the Alliance Pipeline near Towner, ND.

#### Proposed Baker Storage Enhancement

Williston Basin Interstate Pipeline Company is developing a project to increase firm deliverability from its Baker gas storage field in eastern Montana. With current firm storage withdrawal rates of 115 million cubic feet per day (MMCFD), Williston Basin sees an opportunity to add an additional 125 MMCFD of firm withdrawal capacity, which would more than double the firm withdrawal rate from Baker. Along with the gas storage field upgrades, Williston

Basin is planning a pipeline expansion to transport the increased, firm storage volumes to an interconnect with the Northern Border Pipeline in North Dakota. The project has a proposed in-service date of 2012 and an open season is expected in January 2010.

#### Natural Gas Storage Explained

During the mid 1900's, natural gas grew in popularity as a winter heating fuel. As a result, natural gas markets began experiencing seasonal demand swings that needed be managed using underground storage operations. Depleted natural gas fields are most often targeted for storage due to existing infrastructure and reservoir knowledge. During the summer months when demand is low, natural gas is injected into storage and when demand increases in the winter months, natural gas is withdrawn for consumer use.



Source: Williston Basin Interstate Pipeline Co.

#### **ND Pipeline Authority**

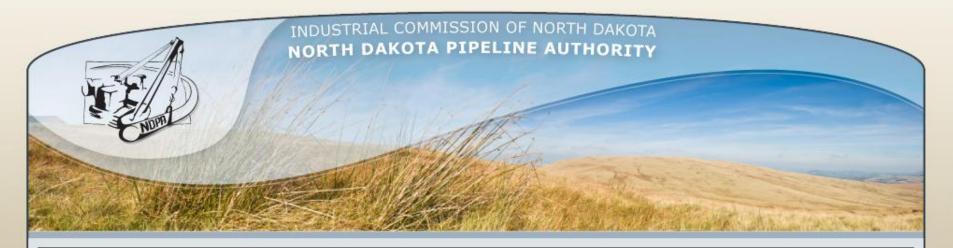
State Capitol 14th Floor • 600 E. Boulevard Ave. Dept. 405 • Bismarck, ND 58505-0840 Phone: (701) 220-6227 • Fax: (701) 328-2820

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Jorth Dakota Pipeline Authority





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#### » ABOUT PIPELINES

"Pipelines are really the energy lifelines of almost every daily activity. Pipelines play a role in everyone's lives and are essential to the nation's industries. Yet few people are aware of the work done by the country's 200,000-mile petroleum pipeline network that delivers the products that are integral parts of America's economy. It is a network that delivers the nation's crude oil and petroleum products (such as gasoline, jet fuel, home heating oil) reliably, safely, efficiently, and economically." ~ Pipeline 101

To learn more about pipeline operations, safety, construction, and more, please visit:



#### **Supply Line Video**



Video provided by AOPL » www.aopl.org



#### Thank You!

North Dakota Pipeline Authority

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